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THE ZOOLOGIST:

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OF

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AND

JOURNAL FOR RECORDING FACTS & ANECDOTES

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Mr. Westwood read the following note:—

"With reference to a note by Mr. Newman, published in the 'Zoologist,' p. 5629, on the subject of the introduction of Acentria nivea into the order Lepidoptera, I beg leave to refer those who may be interested in the question to the first volume of the 'Transactions' of this Society, p. 118, where, twenty-three years ago, I proved the truth of this relationship; also to my 'Introduction to the Modern Classification of Insects,' pp. 324 and 413; to my 'British Moths and their Transformations,' vol. ii., and to Kolenati's 'Monograph of the Trichoptera,' p. 6. Why the propriety of the removal of Narycia elegans of Stephens, with its pectinated antennæ, well-spurred legs and want of thoracic tippets, to the order Lepidoptera, as affirmed by Dr. Hagen, should as a matter of course involve Acentria in the like fate, does not appear to me quite evident. As Mr. Newman, moreover, considers my arguments insufficient for removing Acentria to the Lepidoptera, I call upon him to state upon what other grounds he has arrived at his conclusion. It is generally supposed that Mr. Newman has paid especial attention to the study of the Linnean Neuroptera, and entomologists will doubtless be very anxious to know what structural peculiarities he may have discovered sufficient to outweigh those which I have adduced in my various notices upon the Acentria."

Mr. F. Smith read the following notes:—

On the Habits of Trypoxylon.

"A few years ago the habits of the species of the genus Trypoxylon was a subject of some controversy; St. Fargeau, indeed, described it as being parasitic; the Linnean account, however, is the correct one, and was confirmed, as far back as 1840, by Mr. Kennedy and Mr. Westwood. Any one, however, who is in the habit of watching these insects, running as they do upon posts, rails or sand-banks, and constantly entering the burrows of other insects, might be induced to adopt the opinion of St. Fargeau; and if, in addition to the above habit of the species, he examined the structure of the females, and found them destitute of cilia and spines on the legs, his opinion would no doubt be considerably strengthened as to their parasitism. The observations of numerous hymenopterists have long settled the question, and they are well known to store up spiders as a nutriment for their young. One point in the economy of this genus remains to be established; and I may ask the question, Has any one ever observed a species of Trypoxylon constructing its own burrow? without any chance of its being answered in the affirmative. I am of opinion that there are some species of fossorial Hymenoptera, and also of Apidæ, which never construct a burrow for themselves, always availing themselves of some ready-formed receptacle suitable to their purposes: Trypoxylon is one of these, and, amongst the bees, probably Anthidium is another.

"I have an opportunity of exhibiting this evening a most remarkable illustration corroborative of my opinion as regards Trypoxylon. The Rev. Hamlet Clark obligingly undertook to capture a few Hymenoptera on his late visit to Brazil. In addition to several new species of Formicidæ, he also brought a number of nests of a species of Polistes, also new to me.

"On carefully examining the nests, I observed, in one of them, that several of the cells were closed with red earth or clay. On opening some of these cells, I found them

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stored with spiders, and in one of them a specimen of Trypoxylon fugax of Fabricius. The cells had been tenanted by a young brood of the Polistes before the Trypoxylon took possession of them. This is certainly a very striking illustration of what I believe to be the habit of this genus of insects.

"The nests and the Polistes were obtained by Mr. Clark at Petropolis, where, he informs me, it is common."

On the Habit of Chelostoma florisomnis.

"I have received a letter from Mr. George Kearley, Blomfield Street, Finsbury, in which he describes a singular habit of the males of Chelostoma florisomnis. Mr. Kearley says:—

"'I send you half-a-dozen bees which I took last evening. They were resting in a most singular manner on a dead branch of hawthorn that had been thrust into a hedge to stop a gap; the bees were attached to the points of the thorns by their mandibles, with their bodies stuck out straight and stiff in a line with the thorns, but quite clear of them. Almost every thorn on one part of the bush was grasped by a bee. They were attached so firmly, and were so loth to move, that it required a good shake to dislodge them; and when disturbed they immediately set about attaching themselves afresh. I broke off a twig and carried it to my residence, a quarter of a mile distant, swinging it about, but not one of them relaxed its grasp. On going early to the spot next morning I found the bush still thickly peopled with them, still attached attached by the mandibles alone, the legs being folded under the body, the body itself standing out stiff from the points of the thorns.'

"This habit in the males of Chelostoma being new to me, I have thought it worth recording in our 'Proceedings.' The bees were no doubt, as Mr. Kearley suggests, settling themselves for the night. I have frequently found them huddled together by half-dozens in the closed petals of flowers, but never in the manner above described.

Mr. Westwood read a paper on species of Callirhipus, &c., chiefly taken in Ceylon, by Herr Neitner.

Mr. Moore read descriptions of undescribed species of Euplæa in the collection of the East India Company.

The President expressed his intention to invite the members to a day's excursion at Reigate during the present month.—*E. S.*

NORTHERN ENTOMOLOGICAL SOCIETY.

July 11, 1857.—B. COOKE, Esq., in the chair.

Election of Members.

E. Brown, Esq., of Burton-on-Trent, was elected a Member of the Society. Alexander H. Haliday, Esq., of Dublin, and E. Newman, Esq., F.L.S., of London, were elected Honorary Members.

Exhibitions.

Mr. Greening exhibited Agrotis cinerea, taken on flowers at 12 o'clock at night, near Llanferras, North Wales, the first week in June.

Mr. N. Cooke exhibited a box of insects which he and Mr. E. Birchall had captured in Galway, Ireland, at the end of June. In the box were Zygæna Minos and its pupa-cases; also three varieties of that species, one of them suffused with red all over, except the margins of the wings; also a fine series of Miana expolita, varying from a dull drab, as seen in the generality of Yorkshire specimens, to an intense red and ochreous-brown; and specimens of Satyrus Davus, Rhodaria sanguinalis, Pyrausta octomaculalis, Strenia clathraria, Setina irrorella, Melanippe tristaria, &c., &c. From the great number of specimens and species captured by Mr. Birchall and Mr. Cooke in five days, it would appear there is no truth in the oft-repeated remark that insects are scarce in Ireland, and that when species do occur there are few specimens.

The Secretary exhibited a box in which was Lithocolletis hortella, from the Rev. H. P. Newnham; L. Bremiella, from J. W. Douglas, Esq.; and a series of L. ulicetella recently captured at Wallasey; also Crambus dumetellus, from the sand-hills in the same parish, and Coleophora Vibicella and its cases. The specimens were bred from cases sent by Mr. Crump. He also exhibited Coleophora palliatella and its cases, bred from larvæ sent by Mr. Bond, and Acidalia eburnata.

The Rev. H. A. Stowell kindly sent a box of Coleoptera, amongst which were Leptura ruficornis, Pæderus riparius, Chrysomela sanguinolenta, &c., &c.; and J. A. Brewer, Esq., sent specimens of Callidium violaceum much finer than any yet seen in the North.

Mr. Cooper exhibited Depressaria assimilella bred from larvæ found near Warrington.

Mr. Marrat exhibited Chrysomela Graminis taken at Aber, North Wales.

The Secretary exhibited an Elachista larva feeding on Carex flava, which Mr. Marrat and he had discovered at Formby; and the pupa-cases of Gelechia desertella projecting from Sedum acre, observing that this cannot be its only food, as the insect abounds where the plant is scarce. He then produced a true Tinea which Mr. Greening saw captured, remarking that it was identical with the species below it, and that was the original specimen from which Mr. Stainton first described Tinea pallescentella several years ago.

A member asked, "What are we to understand by Mr. Stainton's recent re-description of Tinea pallescentella, *from another species*, in this year's 'Annual,' when that species had already been named and described in the 'Zoologist,' especially now this insect has again turned up?"

A discussion ensued on names in general, the Secretary pointing out a great number of names by Stephens, Haworth, Fabricius, Treitschke, &c., which ignorant people like him thought were Latin because they terminated with "ana" or "ella;" and observed that the genus Mixodia, *Guen.*, would serve as a good illustration how foreign and British authors Latinized foreign and English proper names by adding "ana;" thus, Bentleyana, *Haw.*, Schulziana, *Fab.*, Zinckenana, *Tr.*, all for one species, and all supposed to be pure Latin.

Mr. Linton informed the meeting he captured Agrotis cinerea at Lewes early in June, flying over flowers in the heat of a noon sun.

The President observed that it was singular one member should take this species at 12 a. noon in the South, whilst another member took it at 12 at night in the North, both on the same day.

The President exhibited a box of Diptera for the Rev. H. H. Higgins, in which were several varieties, including Syrphus Scalaris, Syrphus clypeatus, &c.

Mr. Gregson exhibited a box of Coleoptera, amongst which were Dyschirius impunctipennis and D. politus, and a species of the same genus taken below high-water mark on the Lancashire coast, Hesperophilus arenarius and H. fracticornis, Gripidius Equaseti, Adrostis marginatus (with eggs), Bembidium laterale, &c., which were brought for distribution amongst the members.

Mr. N. Cooke read a paper 'On the Species of Lepidoptera observed or captured in Ireland during five days' collecting there,' after which he distributed his duplicate captures amongst the members present.—*C. S. G.*

Notes on Ascidiæ as a source for Diatomaceæ.—Being engaged, some time ago, in examining some dredged oyster-shells for Diatomaceæ, I discovered, on the surface of one of the shells, a cluster of semi-transparent gelatinous bodies, of a yellowish green colour, the shape being, however, not uniform, owing perhaps to their being dead and flaccid. In shape they approached small hazel-nuts. These I took to be Ascidiæ of some species, as they were apparently enveloped in an outer mantle or skin of somewhat tough consistency. In cutting through this mantle, and towards the centre of the body, a large stomach was exposed, quite distended with what appeared to be brown mud. On examining this under the microscope I was delighted to find it almost entirely composed of Diatomaceæ, still quite fresh and full of endochrome. The Diatoms were mostly uncommon forms: the most conspicuous of these, which occurred in the first specimen I opened, were Coscinodiscus concinnus (in great number and of unusual size), Pleurosigma lanceolatum, *nov. sp.*, Eupodiscus crassus, E. Ralfsii, Eucampia zodiacus, and a curious tubular Rhizosolenia which Mr. Brightwell has named Rhizosolenia styliformis. I have since then examined many Ascidiæ from the same source, and have never failed in any instance in obtaining Diatomaceæ in abundance; and these have been mostly species occurring in deep water, and consequently somewhat uncommon and difficult to obtain, unless the collector is furnished with an expensive dredging apparatus. Some of the forms are of great rarity, and some are even quite new. I would therefore call the attention of all Diatomists to this source as an easy and inexpensive method of obtaining good and rare forms, in a comparatively clean state, without much trouble, as the trawling boats are constantly bringing to market the large dredged oysters, which are frequently covered with Ascidiæ. The locality where my oysters were obtained is some twenty or thirty miles from the Yorkshire coast, a little to the North of the river Humber, and is known as the "Silver Pits." I give annexed a list of the species detected in merely four gatherings, which will serve to show what may be expected when Ascidiæ are examined from other and possibly more favourable localities. The letter A preceding the name denotes that the species occurs abundantly; F, that it occurs occasionally, though less frequently than the first; R, that it only occurs rarely,—perhaps, for instance, one or two specimens in a slide.

F Eucampia zodiacus
F Pinnularia distans
A Pleurosigma lanceolatum, nov. sp., in the way of P. angulatum, but with much coarser striæ. The valve nearly straight, the central line much curved, and with a faint depression running across the centre of the

valve. This form is constant, and occurs in most gatherings from deep water that I have examined
F Pleurosigma prolongatum
R Pleurosigma, small species, with very acute extremities
R Pleurosigma transversalis
R Pleurosigma fasciola
A Coscinodiscus concinnus. Fine and large.
F Coscinodiscus perforatus
A Coscinodiscus excentricus. Fine
F Coscinodiscus radiatus
A Eupodiscus crassus. Fine
F Eupodiscus Ralfsii
R Eupodiscus sculptus
R Eupodiscus Argus. In fragments
R Eupodiscus? nov. sp., with cellular markings like a Coscinodiscus, and a single process near the margin
R Amphiprora didyma?
R Surirella fastuosa
F Biddulphia turgida. Not entire
A Biddulphia Baileyii. Fine
F Biddulphia rhombus
A Biddulphia aurita. In filaments
A Himantidium? sp.
A Rhizosolenia styliformis, nov. sp.
F Rhizosolenia, small species, with ends produced into a long, slender filament
F Rhizosolenia, a curious and beautiful species, apparently new, with feather- or scale-like markings
F Doryphora amphiceros
F Doryphora? sp. with parallel monilliform striæ
F Chætoceros Wighamii
F Chætoceros, apparently two more species
A Actinocyclus undulatus. Fine
F Actinocyclus? sp. without rays
R Nitzschia closterium?
R Nitzschia lanceolatum?
F Orthosira marina
R Orthosira? sp.
A Asterionella? two sp.
R Podosira maculata
A Melosira? sp.
F Stephanopyxis sp. Beautiful species, with cellular structure, and furnished with clubbed or forked horns at the ends of the frustules. Occurs in filaments of four to five frustules
F Stauroneis pulchella
R Triceratium favus. Fragments
R Triceratium striolatum
R Triceratium? curious form, with a star-like marking in the centre of the valve
F Melosira? small form, with longitudinal markings
R Navicula Lyra
R Navicula Hennedyii

—*George Norman; Hull, July* 28, 1857.

List of Podophthalmous Crustacea found in Dublin Bay.

By John R. Kinahan, M.B., M.R.I.A., &c.

(Continued from p. 5717).

Common Hermit Crab (*Bernhardus streblonyx*, Leach sp.) Common in extreme littoral laminarian and coralline zones. It occurs in immense numbers, and of very large size, in the whelk pots, especially when set on a sandy bottom, as outside the Mugglins; also on the lines drifted ashore, as Merrion lines. Spawns in March, April, May. Ova pale purple. There is a well-marked variety of this crab with the claws less spiny and smaller than the typical B. streblonyx; the sides of the chelæ also are strictly parallel, and the specimens are much rarer. This is the form recorded, in doubt, by me as B. Prideauxii, in a paper read before the Dublin Natural History Society, March 13, 1857, Comparison with the typical specimens of B. Prideauxii in the British Museum collection have convinced me my spemens are not that crab. Whether they are more than a variety, therefore, remains to be proved. Though I have taken them frequently, I have never found them in spawn. They differ from B. Prideauxii in the shape of the wrist of the smaller fore-leg. Local name "Soldier."

Dublin Hermit Crab (*Bernhardus Eblaniensis*, mihi). I am not quite convinced of the non-identity of this species with B. Ulidianus, *W. Thompson;* however, until I can obtain typical specimens of that form I must leave it in doubt. The species was recorded by me in the 'Proceedings of the Dublin Natural History Society,' March 13, 1857 (*vide* Nat. Hist. vol. iv. p. 85), as follows:—

"BERNHARDUS EBLANIENSIS.

"Resembling young of B. streblonyx. Hands more regularly globular, very granular, a raised denticulate line marking exterior edge; terminal extremities of posterior pair of legs scarcely twisted. Colour reddish white; legs prettily banded with reddish pink."

It occurs exclusively in deeper water, as at Dalkey (15—30 fathoms) and Bray (25 fathoms); it also occurs, though rarely, in the lobster and whelk pots; and one striking peculiarity about it is that it almost always inhabits clean and recent Natica shells. It is found in spawn in December, January and February, much earlier than B. streblonyx. Ova very dark chocolate-colour. I have never found the intermediate-sized specimens of that species in spawn at all; and, though this species in form is almost indistinguishable from the littoral form of B. streblonyx, I must consider them separate species.

Hairy Hermit Crab (*Bernhardus cuanensis*, W. Thomps. sp.) Coralline and laminarian zones, in dredge exclusively. Dalkey Sound, not uncommon; Bray scallop bank, extremely common and beautiful. In the latter station it inhabits shells coated over with Halichondria suberea? I have not met with it in spawn, though I collected it from December to June inclusive.

Thompson's Hermit Crab (*Bernhardus Thompsoni*, Bell sp.) The rarest of the lesser hermit crabs about Dublin. Same localities as last-mentioned, but much rarer, and specimens all small. Spawns in February, March and April. Ova chocolate-colour.

Broad-clawed Hermit Crab (*Bernhardus Hyndmanni*, W. Thomps. sp.) Same localities as last, and extremely common in the dredge; rare in lobster pots and on long lines. Merrion Strand, drift weed, very rare, *W. V. MacNally, Esq.* This species occurs in clean shells of Natica and Trochus, rarely Turritella. It is essentially an inhabitant of the coralline zones. Spawns in February, March and April. Ova pale chocolate. The adult male specimens have the wrist much elongated, twisted and serrated along the inner edge, and in this state may be mistaken for badly-marked specimens of B. lævis.

Long-horned Porcelain Crab (*Porcellana longicornis*, Linn. sp.) Common under stones in extreme littoral zone, and among Corallina officinalis in rock-pools; also in coralline and deep-sea zones. The arm and wrist, in young specimens, especially from the deeper water, are dentated along their inner margin. I do not find this the case in specimens of the same size from the littoral zone. Drifted in after gales abundantly at Merrion.

Broad-claw Porcelain Crab (*Porcellana platycheles*, Penn. sp.) A local species. Occurs under stones, in extreme littoral zone, at Sandy Cove, Salthill, Portmarnock, &c. It is essentially a scavenger, as in the localities in which it occurs the stones are more or less embedded in a thin layer of fœtid mud, the *débris* of decaying animal and vegetable matters, on which it apparently feeds. Even here it is very choice in its localities, occurring only in detached spots. It is by no means so common in Dublin as in the West. Spawns in April, May and June. Taken also in the dredge by trawlers.

Scaly Galathea (*Galathea squamifera*, Mont. sp.) Extremely rare. Taken in lobster pots in Dalkey and elsewhere. Bray, 1857. Local name for all Galatheæ, "Spanish Lobsters."

Spiny Galathea (*Galathea strigosa*, Linn. sp.) Commoner than the last, but yet rare. I have seen several living specimens from the lobster and whelk pots, and it is also occasionally taken in the long lines.

Embleton's Galathea (*Galathea nexa*, Embleton). I cannot record this species with certainty. A single specimen occurred to me, driven in on Merrion Strand, in 1854. The comparative characters of foot-jaws and hands agreed with the descriptions in Bell. It has since been lost, and I have never met with another specimen.

Slender-clawed Galathea (*Galathea Andrewsii*, mihi). Occurs abundantly in deep water, as on the scallop bed at Bray, and in Dalkey Sound. It never exceeds half an inch in length. I first met it along with the channel-tailed shrimp, December, 1856, at Bray. Spawns in February, March and April. A most variable species in colour when alive. For description *vide* Zool. 5759. There is an unnamed specimen of this species in the collection of Trinity College Dublin Museum, put up by the late Dr. Ball, probably from Dalkey Sound.

Fresh-water Cray-fish (*Astacus fluviatilis*, Fabr.) One, at least, in Bray River, Co. Wicklow, formerly also in the Liffey. Perhaps introduced. This species is brought to market.

Common Lobster (*Homarus vulgaris*, M.-Edw.) Among rocks, very common. In spawn all the summer. Captured for market in wicker pots and drum nets. The most esteemed of all the Crustacea for the table here. The largest specimen I have seen was captured in Kingstown Harbour, by Joseph Todhunter, Esq.; it is now in the Museum of the University of Dublin; its length is 2½ feet, breadth of carapace 5 inches, great claw 1½ foot long.

Norway Lobster (*Nephrops norvegicus*, Linn. sp.) Dredged outside Poolbeg, and brought in great quantities to market, where they do duty in the Dublin "shell-fish" shops as "prawns." Occasionally drifted in at Merrion.

Common Shrimp (*Crangon vulgaris*, Fabr.) Abundant in all our sandy beaches, in pools and among rocks, in sandy patches, generally keeping near high-water mark; also in mouths of tidal rivers, as the Dodder, at Ringsend; ascending even into nearly fresh water. Specimens here are small, and not collected for the table. There is a tradition that all the shrimps were destroyed in Dublin Bar in a hard frost in 1740, and that they have never since grown to their former size! This species, more than any other, suffers from the heat of the summer's sun. On the 8th of August last thousands could have been collected dead in the dried-up strand-pools, this being almost the only species of Crustacea to be met with. Spawns in March and through the summer. Ova purplish. The specimens in autumn and winter have a conspicuous black tail.

Banded Shrimp (*Crangon fasciatus*, Risso.) This rare shrimp I have met with in but one locality, a small pool in a bank near Sandycove, at extreme low water. Spawns in May. Ova bright salmoncolour. The broad black band on the further segment is most distinctive, and very different from the black *patches* occasionally found in a similar situation in the common shrimp.

Sculptured Shrimp (*Crangon sculptus*, Bell). A single specimen dredged on the scallop bank, Bray, December, 1856.

Channel-tailed Shrimp (*Crangon Allmani*, mihi). Met with in some abundance on scallop bank, Bray, in about 25-fathoms water. Spawns in March. Ova dirty grayish colour. (For description of this new species see Zool. 5759, and Nat. Hist. Rev. vol. iv. p. 80).

Varying Sand Shrimp (*Hippolyte varians*, Leach). Extreme littoral zone, in sand-pools, from April to June, abundant; in Zostera banks, Sandycove; at Howth, rare; Merrion Strand, washed in, very rare; also dredged in Dalkey Sound, but rare. Generally of a pink-colour. Spawns April to June. Ova dark chocolate-brown. Its variety of colours well deserve its specific name. The beak varies considerably in form and dentition. I never met with a specimen, however, in which the posterior superior tooth was absent. It is a difficult species to keep in a vivarium. It occurs in lobster pots.

Short-beaked Sand Shrimp (*Hippolyte Cranchii*, Leach). In the same pools as the last, but much rarer; also Merrion Strand, where it has occurred several times. I have neither dredged it nor seen it in the lobster pots. Spawns in May. Ova dark chocolate-brown: its beak often quadridentate above.

Kröyer's Sand Shrimp (*Hippolyte pusiola*, Kröyer). Common in coralline and extreme laminarian zones; hence frequently dredged in Dalkey Sound, and on the scallop bed, Bray; common in lobster pots; I never saw it in sand-pools. I first met with the species in 1854. The spine over the orbit and the simple apex of the beak, irrespective of other characters, distinguish it at once from H. Cranchii. Spawns in April, May and June. Ova bright emerald-green.

Thompson's Sand Shrimp (*Hippolyte Thompsoni*, Bell). Extreme laminarian and coralline zones, but rare. Dalkey Sound; Bray.

Common Æsop Prawn (*Pandalus annulicornis*, Leach). Rock-pools, rare; laminarian and coralline zones, not uncommon; scallop bank, in hundreds; also in the lobster and crab pots. Spawns in March. Ova pale purple. Occasionally brought to market as shrimps.

Blue-banded Prawn (*Palæmon Squilla*, Leach). Rock-pools, extremely abundant. In the summer months this species is found abundantly in the pools at Sandycove. Many of these pools are small in size, and have little communication with the sea; perhaps not more than two tides out of thirty enter them. The water is frequently quite warm to the touch; yet in it a well-marked variety of this shrimp abounds. This variety is smaller in size (about one-fifth less), the beak always ending in a single point, and much deeper and shorter; the hands are more slender; but in other respects the animals appear identical. This variety has been figured in Desmarest's 'Consideration des Crustacés' as P. varians, but is distinct from that species here, the blue and orange bands of the legs separating it easily. Spawns all through the summer. Ova brown. Local name "Shrimps." Although found in such abundance, it is never brought to market. This is the species alluded to by Rutty as destroyed by the frost of 1740, and not P. serratus as W. Thompson states.

Varying Prawn (*Palæmon varians*, Leach). In sand-pools at Merrion, rare. Easily distinguished from the last by the total absence of all coloured bands on the hands, &c. It is more restless in a vivarium than P. Squilla, but easily reared. I have had it for the last five months.

Varying Opossum Shrimp (*Mysis Chamæleon*, J. V. Thompson). Extremely abundant in sand-pools from March to September, when it spawns. Rare near the shore, at other times also in Zostera pools. The ova, which are pale yellow, are easily hatched.

Common Opossum Shrimp (*Mysis vulgaris*, J. V. Thompson). Common in strand-pools all the year round at Merrion. Abundant in the tide-way of the Dodder. Spawns the same time as the last. Not so common in the deeper pools.

Mysis ——— ? A small species, distinct from the M. Chamæleon, abundant in Zostera pools, which I think may be Mysis Lamornæ; but further investigation is required.

The following species are recorded as having occurred about Dublin; but living specimens have not come under my notice:—

Three-spined Shrimp (*Crangon 3-spinosus*). Looking over a collection of small Crustacea collected by the late Dr. Robert Ball and Prof. Forbes off Skerries, in 1845, I found three specimens of this shrimp previously unrecorded as Irish.

Spiny Lobster or Sea Cray-fish (*Palinurus vulgaris*, Leach). Rare, but has been captured at Dalkey, in lobster pots and on long lines; also at Bray. Though I have never seen a specimen thence myself, there can be no doubt of the fact. Occasionally brought to market here, chiefly from the West, but not much esteemed. Local name "Crawfish."

Common Prawn (*Palæmon serratus*). Has been accurately described to me by the Bray fishermen as occurring in their lobster pots in the summer. However, Pandalus annulicornis may have been mistaken for it.

Pasiphea Sivado, *Risso.* A single specimen in the British Museum was stated by its donor, the Rev. James Bulwer, to have been taken near Dublin (Thompson's Nat. Hist. Ireland, vol. ix. p. 392).

JOHN R. KINAHAN.

Donnybrook, Dublin,
August 12, 1857.

Determination of the Species of Phryganidæ described by Mr. Stephens, in his 'Illustrations of British Entomology.' By H. HAGEN, M.D. (Communicated by Dr. J. E. GRAY).

British Museum,
July 6, 1856.

MY DEAR SIR,

Dr. Hagen, of Königsberg, having paid a visit to the Museum for the purpose of determining the specimens of Trichoptera and Neuroptera in that collection, he examined with care the specimens, described by Mr. Stephens, now contained in the British collection, for the purpose of determining the names which these species bear in the continental works. I herewith send results of his labours as far as the Phryganides are concerned; and if you consider that they will be useful to your readers I will send you, for a future number of the 'Zoologist,' his observations on the Perlides, Psocides and Panorpides.—Believe me, my dear Sir,

Yours very truly,
J. E. GRAY.

Edward Newman, Esq.

Acentropus niveus, *Ill. Brit. Ent. Mand.* vi. 150, is a lepidopterous insect of the family Crambidæ.

Hydroptila tineoides and H. brunneicornis, *Id.* p. 152 = H. pulchricornis of Pictet.

Hydroptila sparsa = H. tineoides of Dalman.

Hydroptila Vectis and H. costalis. Of these two species there is no example in the Stephensian cabinet.

Agraylea sexmaculata and A. multipunctata, *Id.* p. 153. Of these species there is no example. They appear to constitute but a single species, and the former name is probably correct.

Narycia elegans, *Id.* p. 154, is a lepidopterous insect, and is twice described by Mr. Stephens as Xysmatodoma (Tinea) melanella and X. atrella. [This insect is also the Tinea atrella of Haworth, *Lep. Brit.* p. 566, and probably the T. sequella of the same author, according to Stainton, who gives the T. stelliferella of Fischer-von-Röslerstamm, Pl. 59, as another synonym. See Stainton, *Ins. Brit. Tin.* p. 21]

Agapetus funereus and A. fuscipes, *Id.* p. 156, are females of A. ciliatus of Pictet.

Agapetus laniger = A. comatus of Pictet.

Agapetus comatus, *Id.* p. 157, is the male of A. ciliatus of Pictet.

Agapetus setigerus and A. azureus. Of these two species no examples exist for comparison ; the latter is described after Turton.

Beræa albipes, *Id.* p. 158. No example.

Beræa pygmæa and B. Marshamella appear to be new species.

Anticyra phæopa, *Id.* p. 159 = Psycomia unicolor of Pictet, male.

Anticyra gracilipes = Psycomia fragilis of Pictet, female (Hydropsyche, *Pictet*).

Anticyra subochracea, *Id.* p. 160 = Psycomia of Pictet, female.

Glossosoma Boltoni, *Id.* p. 161 = Glossosoma vernalis of Pictet (Rhyacophila, *Pictet*).

Glossosoma fimbriata is apparently a new species.

Tinodes pallescens, *Id.* p. 162, is a new species, and T. flaviceps, T. xanthoceras and T. pallipes, *Id.* p. 163, must be referred to it.

Tinodes luridus = Philopotamus longipennis of Rambur.

Tinodes annulicornis is a new species.

Tinodes albipunctatus, *Id.* p. 164, is a new species of Hydropsyche.

Tinodes obscurus is the female of Glossosoma fimbriata of Stephens, mentioned above.

Tinodes pusillus is a new species of Psycomia.

Rhyacophila vulgaris, *Id.* p. 165, R. Stigma, *Id.* p. 166, and R. opaca, constitute but one species, and correspond with the R. vulgaris of Pictet.

Rhyacophila nebulosa is a new species of Hydropsyche.

Plectrocnemia Senex, *Id.* p. 168 = P. Senex of Pictet.

Philopotamus Scopulorum, *Id.* p. 169, P. variegatus and P. montanus, p. 170 = P. variegatus of Pictet.

Hydropsyche atomaria, *Id.* p. 171 = H. atomaria of Pictet.

Hydropsyche tenuicornis, *Id.* p. 171, and H. pellucida, p. 172 = H. tenuicornis of Pictet.

Hydropsyche guttata and H. lanceolata, *Id.* p. 173 = H. cinerea of Pictet.

Hydropsyche hibernica, *Id.* p. 173 = H. læta of Pictet.

Hydropsyche angustipennis = H. variabilis of Pictet.

Hydropsyche fulvipes = *Id.* p. 174, is a new species.

Hydropsyche angustata = Rhyacophila vulgaris, mentioned above.

Cyrnus unipunctatus, *Id.* p. 175, and C. pulchellus together constitute a new species.

Cyrnus urbanus is also a new species.

Cyrnus unicolor, *Id.* p. 176. Of this there is no example.

Polycentropus subpunctatus, *Id.* p. 177, P. picicornis, P. pyrrhoceras, P. fuliginosus, P. irroratus, p. 178, and P. multiguttatus, are all new species. P. concinnus is identical with P. fuliginosus, and P. trimaculatus with P. subpunctatus.

Aphelocheira flavomaculata, *Id.* p. 179, is a new species; but no example exists of A. subaurata, *Id.* p. 180.

Brachycentrus subnubilus, *Id.* p. 182, is a new species, the female = Pogonostoma vernum of Rambur, the Hydronautia maculata of Kolenati.

Brachycentrus concolor and B. costalis are males of B. subnubilus.

Potamaria analis, *Id.* p. 183, P. assimilis and P. hyalina are females of Sericostoma collare of Schr. and Sericostoma Spencii, *Id.* p. 184, is the male of the same insect. Analis is the variety multiguttatum of Pictet and hyalina has the wings much rubbed.

Notidobia atrata, *Id.* p. 186 = ciliaris, *L.*

Silo pallipes = S. (Trichostoma) picicornis of Pictet.

Goera pilosa, *Id.* p. 187 = the female of G. (Trichostoma) capillata of Pictet, and G. flavipes is the male of the same insect.

G. vulgata, *Id.* p. 188 = Silo (Trichostoma) fuscicorne of Pictet.

G. irrorata is described after Mr. Curtis.

Mormonia nigromaculata, *Id.* p. 189, is a new species, = the female of Lepidostoma squamulosum of Rambur, and is perhaps the P. hirta, *F.* M. hirta and M. immaculata are males of the same species.

Mormonia minor is a new species.

Chimarra marginata, *Id.* p. 191 = C. marginata, *L.*

Odontocerus albicornis, *Id.* p. 193 = O. albicornis of Scopoli and Pictet.

Odontocerus maculipennis, *Id.* p. 193, is described after Mr. Curtis.

Ceraclea nervosa, *Id.* p. 194 = C. nervosa, *F.*

Leptocerus ochraceus, *Id.* p. 195 = L. pilosus, *Mull.*

Leptocerus testaceus = Setodes lacustris of Pictet.

Leptocerus obtusus, L. nigricans, L. ater, *Id.* p. 196, and L. niger = L. ater of Pictet.

Leptocerus perfuscus is a new species, male = L. rufinus of Rambur.

Leptocerus aureus, *Id.* p. 197, and L. annulatus are new species, males.

Leptocerus dissimilis is a new species, male = L. vetula of Rambur, and L. assimilis, *Id.* p. 198, is the female of the same.

Leptocerus bimaculatus is a new species, male.

Leptocerus interruptus, *Id.* p. 198, is a new species, male = L. albifrons of Rambur.

Leptocerus affinis = L. albifrons of Pictet, male. There is also a specimen of L. bifasciatus of Pictet, male.

Leptocerus annulicornis, *Id.* p. 199 = L. fulvus of Rambur, female. There is also a specimen of L. vetula of Rambur, female.

Leptocerus seminiger is the female of L. aureus of Stephens, mentioned above.

Leptocerus cinereus is a new species, female.

Leptocerus filosus = L. pilosus of Pictet, female.

Leptocerus caliginosus, *Id.* p. 200. There is no specimen of this insect.

Leptocerus aterrimus = L. ater of Pictet, female.

Leptocerus bilineatus = L. albifrons of Pictet, female.

Leptocerus quadrifasciatus = L. quadrifasciatus, *F.*

Leptocerus longicornis, *Id.* p. 201, a new species = Setodes conspersa of Rambur.

Leptocerus rufo-griseus = L. tineoides of Scopoli.

Leptocerus bicolor is a new species.

Leptocerus elongatus is a new species.

Leptocerus tineiformis, *Id.* p. 202, is the same as L. elongatus. There is also under this name a specimen of Setodes ochraceellus of Rambur.

Leptocerus attenuatus = L. filicornis of Pictet.

Molanna nigripalpis, *Id.* p. 203, and M. angustata = M. angustata of Curtis and Nais plicata of Rambur.

Phryganea grandis, *Id.* p. 205 = P. grandis, *L.* There are also specimens of P. fulvipes of Burmeister.

Phryganea Beckwithii, *Id.* p. 206. There is no specimen of this insect.

Phryganea atomaria = P. grandis, *L.*, male.

Phryganea varia = P. varia, *F.*

Phryganea minor, *Id.* p. 207 = P. minor of Curtis.

Halesus digitatus, *Id.* p. 208 = H. digitatus, *Schr.*

Halesus cingulatus, *Id.* p. 209, is a new species of the genus Stenophylax.

Halesus Vibex = Stenophylax striatus of Kolenati.

Halesus latipennis = Stenophylax pilosus of Pictet.

Halesus hieroglyphicus, *Id.* p. 210 = Stenophylax striatus of Kolenati.

Halesus lateralis = Stenophylax pilosus of Pictet.

Halesus stellatus is described after Mr. Curtis.

Limnephilus pellucidula, *Id.* p. 211 = Glyphotælius pellucidus of Olivier.

Limnephilus Lineola, *Id.* p. 213 = Grammotaulius atomarius. There is also a specimen of G. nitidus under the same name.

Limnephilus flavicornis and L. dorsalis = L. flavicornis, *F.*

Limnephilus discoidalis, *Id.* p. 214. There is no specimen of this insect.

Limnephilus rhombicus = L. rhombicus, *L.*

Limnephilus marmoratus. There is no specimen of this insect.

Limnephilus binotatus, *Id.* p. 215, a new species = L. vitreus of Rambur.

Limnephilus elegans and L. nebulosus are new species.

Limnephilus lunatus, *Id.* p. 216 = L. vitratus of DeGeer.

Limnephilus Stigma is a new species = L. fulvus of Rambur.

Limnephilus griseus, *Id.* p. 217 = Goniotaulius obscurus of Rambur.

Limnephilus costalis, a new species = Goniotaulius anastomosis of Kolenati.

Limnephilus affinis is the same as the last.

Limnephilus marginalis, *Id.* p. 218, L. fenestralis, L. bipunctatus, L. signatus, L. obliquus, *Id.* p. 219, L. luniger = P. griseus, *L.* L. signatus also = G. fenestratus of Kolenati.

Limnephilus Auricula, *Id.* p. 220 = G. geminus of Stephens and G. fenestratus of Kolenati.

Limnephilus geminus is a new species.

Limnephilus obscurus = G. geminus of Stephens.

Limnephilus fuscus, *Id.* p. 221, a new species = Desmotaulius Megerlii of Kolenati.

Limnephilus cœnosus. There is no specimen of this insect.

Limnephilus punctatissimus, L. Vinculum, *Id.* p. 222, L. tenebricus, L. fuscatus and L. sparsus, *Id.* p. 223 = L. fuscus of Stephens, mentioned above.

Limnephilus irroratus = Desmotaulius hirsutus of Pictet.

Limnephilus flavescens is a new species.

Limnephilus ochraceus. There is no specimen of this insect.

Limnephilus consobrinus, *Id.* p. 224 = Goniotaulius vittatus, *F.*

Limnephilus notatus = Goniotaulius flavus, *L.*

Limnephilus substrigosus. There is no specimen of this insect.

Limnephilus bipartitus, *Id.* p. 225, L. vittatus and L. nigrovittatus = G. vittatus, *F.*

Limnephilus præustus, *Id.* p. 226, and L. flavus = G. flavus, *L.*

Limnephilus centralis, *Id.* p. 227 = G. punctatus of Stephens, female.

Limnephilus punctatus is a new species, male = G. nebulosus of Rambur.

Limnephilus elongatus = G. punctatus of Stephens, female.

Limnephilus fuliginosus = G. punctatus of Stephens, male.

Limnephilus ustulatus, *Id.* p. 228 = G. punctatus, a variety.

Limnephilus incisus is a new species = Colpotaulius excisus of Kolenati.

Agrypnia Pagetana, *Id.* p. 229, is a new species.

Anabolia nervosa, *Id.* p. 230, and A. lurida = Stathmophorus fuscus of Kolenati.

Anabolia testacea, *Id.* p. 231, A. annulata and A. flavipennis = Halesus flavipennis of Pictet.

Anabolia nigricornis, *Id.* p. 232 = Stathmophorus destitutus of Kolenati.

Anabolia dubia is a new species of Stathmophorus.

Chætopteryx villosa, *Id.* p. 233 = C. villosa, female, and tuberculosa, male.

Chætopteryx brevipennis. There is no example of this insect.

Neuronia fusca, *Id.* p. 234 = N. ruficrus of Scopoli.

Capture of Vanessa Antiopa at Ipswich.—I had the good fortune to obtain a good specimen of Vanessa Antiopa in our own garden, on the 25th of August.—*Samuel Alexander; Northgate House, Ipswich, August* 29, 1857.

[A number of notices of the capture of Antiopa have been published in the 'Intelligencer' and elsewhere.—*E. N.*]

Deilephila Galii at Kingston.—A female specimen of this rare species was found in a spider's web in the nursery grounds belonging to the Messrs. Jackson, of this town. It is in very good condition, considering its entanglement in the meshes of the web when found.—*A. F. Sheppard; Rutland House, Kingston-on-Thames, September* 10, 1857.

Capture of Stenia punctalis, &c., in the Isle of Wight.—Stenia punctalis was very abundant at Ventnor last July: I set out about a hundred specimens for my friends. I met with nearly all the insects usually taken in the island at that season of the year, including Ænectra Pilleriana and the rare Gelechia inornatella.—*Id.*

Larvæ of British Eupitheciæ.—I have now feeding one-third of the British species of Eupitheciæ, and intend exhibiting them at the next meeting of the Northern Entomological Society, with a view of inducing some of our members to investigate this hitherto neglected genus. They are all beautiful larvæ, some of them remarkably so; and, although some of the perfect insects can only be distinguished by the most practised eye, the larvæ are the most opposite things imaginable: thus assimilata of Doubleday's list (Zool. 5140) feeds on the under side of currant-leaves, and is a long, slender, light green looper, until the last skin, when it becomes brown; and absynthiata of the same list feeds upon the flowers and seed of Senecio Jacobæa, and is a short and very stout larva, red, yellow, all sorts of greens and light browns; indeed, no two larvæ are alike.—*C. S. Gregson; Edge Lane, Stanley, September* 13, 1857.

[Here is another instance of heterocampous and isomyious Lepidoptera. See Zool. 5523.—*E. N.*]

Capture of Mallota vittata on the Banks of the Thames.—I have been so fortunate as to find, in countless profusion, a dipterous insect the very name of which has only crept into Britain, as it were, by stealth, and British examples of which appear almost unknown. I may as well make a clean breast of it at once, and say that I had gone so far as to regard this beautiful insect as new to Science, and, notwithstanding the repeated warnings of the cautious, had ventured to give it a name. Mr. Haliday, however, who is as remarkable for the extent of his knowledge as for the readiness and obliging manner with which he communicates it, set me right on this point; and, having compared my specimens with authentic ones received from Professor Loew, he assures me he found them identical as species. The British history of this insect may be given in a few words. It is figured at Plate 429 of Curtis's 'British Entomology' as Helophilus Ruddii, from a specimen taken near Yarmouth, in Norfolk. Mr. Walker, in the 'Insecta Britannica,' Diptera, i. 251, gives the name as a synonym of Helophilus transfugus, to which species it certainly has but small resemblance. It is due to Mr. Walker to say that he must have judged entirely from Mr. Curtis's figure, because, when I had the pleasure of showing him the insect, it proved entirely new to him. The following description may perhaps be useful:—

Crown of the head black, becoming paler towards the antennæ, which are black and seated in a glabrous prominence; face silvery white, with a raised glabrous black line descending to the mouth; metothorax dusky luteous, approaching to testaceous-brown, with four conspicuous black vittæ, of which the lateral ones are separated from the others by a very decided interspace; the median pair are approximate, and frequently fused together posteriorly: the scutellum is black at the base and ferruginous at the apex: the first dorsal segment of the abdomen is gray, and partially covered by the scutellum; the second, third and fourth segments are velvety black, each with two very distinct, somewhat arcuated, abbreviated vittæ, of a pale luteous hue, the concave margin of each presented towards the lateral margin of the segment; the second segment is broadly, the third and fourth narrowly, margined laterally with testaceous: the legs are black; the apex of the femora, the base of the tibiæ, and a median ring on the tibiæ, obscure on the fore and middle pairs, but distinct on the hind pair, testaceous. The length of the body is five-tenths of an inch; the expanse of the wings eight-tenths.

Habitat. Banks of the Thames about Greenwich, Isle of Dogs, Woolwich marshes, &c., on the Scirpus maritimus. Profusely abundant throughout the autumn. Never taken on the wing.—*Edward Newman.*

Stenophilus elegans: a History.—On the 28th of June, a baking hot day, I went on an exploring expedition to Sheerness, and on my way fell in with Dr. Power, and, like verbs substantive, active and passive, we signified that, on this occasion, we would be, do and suffer together. Soon we came to the ditch where, when it was dry, the Rev. Hamlet Clark found Stenolophus elegans, a species that has since remained one of the rarest Geodephaga,—one of the few British species not known on the Continent. Now the ditch was full of water, but at the end was some *débris*, and under the first piece I moved lay a S. elegans, glittering in the sunshine, but, in an instant, it was into a hole between two fixed stones, and of course I saw it no more. I carefully examined the rest of the refuse, covering a yard or two of ground, but no other beauty again showed itself; so I gloomily gathered up my sweeping-net, and went on after Power, who was hastening forward, evidently in the potential mood. All the way I turned up stones in vain: everything was burnt out. When I overtook Power he was busy in a swamp full of tall grasses, where the surface of the mud had become dried, and at first no living thing was visible. But I followed his example, brought my eyes down to the ground, picked it over with a knife, and soon was gladdened with the sight of S. elegans. How it ran, or rather glided, in an instant under the loosened bit of dried mud! Then another and another showed themselves for a second, and disappeared. Soon I found the only way to secure them was to clutch with my fingers on the spot where I saw one, and deposit the mud I took up on the white sweeping-net which lay at my side; over this surface the little fellows could not run quite so nimbly as on their native land. When I had managed to get twenty-one specimens, I thought I had enough, and Power and I beat a retreat, or rather we were beaten by the heat before we beat the retreat. On counting the heads of captives, Power found he had forty-five, at which no one who knows the Doctor will be surprised; but it is only fair to myself to say that he had half-an-hour's start of me at the work. Former expeditions have usually resulted in a tale of one: to most readers this will be a tale of wonder.—*J. W. Douglas; Lea, July 5.*—*From the 'Intelligencer.'*

Cleonus sulcirostris.—A young entomological acquaintance wrote to me the other day to ask if I could give him a specimen of Cleonus sulcirostris. I was at the time entomologizing at Deal. I had observed an odd specimen or two on some thistles; so next day I gave a look out after Cleonus. On the ground, at the roots of thistles, I soon found a fine specimen or two. Many of the thistles were quite dead and withered,—black, as may be commonly observed; these are intermixed with green, healthy plants: the dead ones have been killed by Cleonus. As the readiest way of obtaining fine examples, and of saving time, let the collector dig up the dead plants during this month: the roots are long and require digging deep for. On digging up some at Deal I found, usually about six or eight inches under ground, a part of the root swollen: this, in every instance, contained either larva, pupa or perfect insect. There is no difficulty in breeding them: stick the dead, swollen portion of the root into moist sand, and keep it so; place them where they will have a little sun daily, and they will soon arrive at maturity. I had a fine one out this morning. This may be useful to young collectors.—*Frederick Smith; 27, Richmond Crescent, Islington, N., August* 25.—*Id.*

The Locust at Westminster.—About the second week in August a fine specimen of the locust (*Gryllus migratorius*) flew into the bar of the 'King's Arms,' Millbank St., Westminster, and was captured, and exhibited for some time under a glass shade on the counter, where it attracted considerable attention. It was about three inches in length. I have heard of several other captures of it in various parts of town, but this is the only one that has come under my notice.—*William Gostling;* 14, *Chester Place, Kennington Cross, September* 4, 1857.

The Locust in Suffolk.—A living male of the migratory locust was brought me yesterday, the 20th of August.—*J. S. Henslow; Hitcham, Suffolk.*

The Locust at Highgate.—A specimen of the European locust rose at my feet in a field in Kentish Town, close to the bottom of Highgate Hill. It kept taking short flights, and, although I pursued it the whole length of the field, I could not succeed in capturing it. The last time I saw it, it settled about fifty yards in front of me, among some nettles (as far as I could see). Although I pulled the nettles up by the roots, it did not appear again, and all my subsequent visits to the field were fruitless.—*F. A. Walker; St. Michael's House, South Grove, Highgate, August* 24, 1857.

The Locust in Ireland.—A live locust, a strange visitant to this part of the world, may now be seen at this office. It was found in a field at Gortrush, in the neighbourhood of this town, by a son of Mr. John Houston, ironmonger, on Tuesday morning last, the day after the thunderstorm. The young lad, seeing it hopping about, and fancying it was a bird, with some difficulty caught it, and brought it to his father, who kindly presented it to us. It is clearly a locust, that destructive insect whose ravages are proverbial,—one of those whose approach, from the innumerable myriads that compose their squadrons, is announced in prophetic language as a day of darkness and of gloominess, and whose desolating march is thus described:—"The land is as the Garden of Eden before them, and behind them a desolate wilderness; yea, and nothing shall escape them." This locust is about 2½ inches long, strong in body and very active. Has a locust been found in this country before?—*Tyrone Constitution.*

The Locust in Scotland.—On the 19th ultimo one of these insects was found alive in a field on the farm of Achvochkie, in Strathspey, by Mr. James Grant, of Advie, and is now in the Elgin Museum. In an unusually hot summer, some ten years ago, many locusts were found along the eastern counties of the island; so, in the present season, we expect to hear of them in like numbers. The Rev. L. Shaw, in his 'History of the Province of Moray,' gives a lengthened description of this insect, and records its occurrence in this district in 1748, the only notice, save a newspaper one from Sutherland in 1846, that we have of these singular creatures having been detected so far north in Scotland.—*George Gordon; Birnie, by Elgin, September*, 1857.

The Locust at Kingston-on-Thames.—I took a very fine specimen of this insect in our own garden at Kingston, on Friday, the 11th inst. Another was seen, but made his escape.—*A. F. Sheppard; Kingston, September* 19, 1857.

The Locust at Huddersfield.—I had scarcely read Mr. C. R. Bree's communication in last week's 'Intelligencer,' when I was summoned to see an extraordinary insect which had been captured on the grass plot before our Infirmary. On examination it proved to be a locust, still very lively, although having been repeatedly dosed with chloroform. Only a week before, some boys had shown me another: they said theirs had come from Africa in a bale of wool; it ate grass voraciously.—*D. E. Brown; Queen Street, Huddersfield, September* 2.—*From the 'Intelligencer.'*

The Locust in Sussex.—Three locusts were brought to me to-day.—*J. J. Reeve; Newhaven, Sussex, September* 7.—*Id.*

The Locust near Walton Heath.—A fine specimen of this hitherto rare British insect was found, on the 2nd of September, by a woman, near Walton Heath, and is now in my possession.—*D. Watney; Box Hill, Dorking, September* 9.—*Id.*

The Locust at Ripon.—A specimen of this insect (the European locust) was taken by my sister in her garden, on Sunday, the 23rd of August last: it is still alive, and measures about two inches and a half in length and nearly five inches in expanse of wing. I believe several other locusts have been taken in Yorkshire during the present summer.—*Edward Morton; Ripon, September* 10.—*Id.*

The Locust in Yorkshire.—I have just seen a fine specimen of Gryllus migratorius, taken in a garden near this city. The lady who found it keeps it in a glass case, feeding on the leaves of red beech, on which it appears to thrive.—*J. Hasledine Tutin; Ripon, September* 10.—*Id.*

[A number of other notices of the capture of the locust have been printed during the present month in provincial papers; others are communicated to me by friends at Brighton, Lewes, Godstone, Epping, Brixton, &c., &c.—*E. N.*]

Otter in Norfolk.—While fishing in Norfolk, on Barton Broad, in July last, I was fortunate enough to see a fine otter, who swam very leisurely across a gap in the reeds, close to the boat. I am informed that there are several in the same neighbourhood, which swarms with fish, and that several young ones have been seen at different times. Close to the same spot I saw, two or three years ago, a fine osprey; and a friend of mine has a specimen of the little auk shot there last winter.—*William Gostling; 14, Chester Place, Kennington Cross, September* 4, 1857.

Young Water-rat suckled by a Cat.—On the 16th of last June I found, in a willow stump, the nest of a water-rat (*Mus amphibius*), containing four young water-rats, quite blind. One of them I flung into the water, and although quite blind it swam to land. I kept one and killed the rest. I took the one which was alive to a cat which had kittened the day before, and put it on the ground. The cat immediately jumped out of the basket, and returned to it with the rat in her mouth. The next day, on going to see which of the kittens should be killed, I found, to my surprise, the cat suckling the rat and four kittens. I had three of the kittens killed, and kept the other with the rat. On the 23rd of the same month the rat's eyes opened, and from that time I had great difficulty in catching it, as it got quite wild, but was still suckled by the cat. When I took the rat away the cat followed me, and directly I put it down she would take it in her mouth and carry it back. In the beginning of July I found the rat dead in the nest. What the cause of its death was I cannot say, but there were no marks upon it to show that the cat killed it. The most extraordinary circumstance is that the cat suckled it before it had its kittens taken away.—*H. G. M. Williams; Crick House, near Chepstow, August* 27, 1857.

Note on the Occurrence of three Honey Buzzards (Falco apivorus) *at Northrepps, Norfolk.*—About 9 o'clock this morning I was riding along a broad green drive which runs through a wood in this place, when a honey buzzard rose from the grass, and alighted on a tree on the edge of the wood. I shortly after sent my gamekeeper in pursuit of it, and he succeeded in shooting it near the spot where I saw it. Hearing afterwards that before he shot this bird it had been seen flying in company with a second specimen, he returned to the drive, and succeeded in shooting that also, very nearly at the same spot where he had procured the first specimen, being guided in his search by loud whistling cries which the bird was making, probably as a call-note to the one which had been previously shot. About two hours later my son, who was passing through the drive, saw a third specimen rise from the ground and alight on a tree, in a similar manner and nearly in the same place as the first. The gamekeeper was again sent in pursuit; but when he succeeded in getting a view of this bird it had risen so high in the air that it was out of shot, and continued flying at a great height in an inland direction till it disappeared. Both specimens that were procured were in full adult dress, and possessed the beautiful gray tinge on the head which always distinguishes the adult examples of this bird. On dissection both of these specimens proved to be male birds. The stomachs of both contained the remains of wasps and wasp-grubs.—*J. H. Gurney; Northrepps, near Cromer, Norfolk, August* 25, 1857.

Occurrence of the Rosecoloured Pastor (Pastor roseus) *near Penzance.*—A female specimen of this bird was captured, a few days since, in our neighbourhood.—*Edward Hearle Rodd; Penzance, September* 16, 1857.

Autumnal Migratory Movement: Scilly Isles.—It has been noticed, on a former occasion, that the Scilly Isles form a sort of resting-place for our migratory birds in the great autumnal movement from the North to the South. This movement at first begins with the Limosa, Tringa, and other genera, in August, and continues to October, with the woodcock. At Scilly I find, from a correspondent, that snipes, godwits, and several of our small soft-billed birds are now to be seen. Many of the latter, birds of the year principally, are to be found flitting about in a restless state, and amongst them the young of the pied flycatcher, which is almost entirely confined to a few of the midland counties, and is unknown in the West of England. It will be a more interesting fact still to find that young nightingales form a portion of the party, as no recorded example exists of the nightingale having been seen or heard in Cornwall.—*Id.*

Wagtail's Nest in a Scarlet Geranium.—While staying in Northamptonshire, in July of this year, Lord Exeter's gamekeeper informed me of a curious incident which had just come under his notice. There had been a flower-show at Stamford on the preceding day, and, amongst other floral gaieties, there were some large scarlet geraniums, in pots, from a terrace outside Burleigh House. Shortly after they had been replaced on the terrace a pair of pied wagtails (*Motacilla Yarrellii*) were observed very busily engaged about one of the pots, and on further examination it was found that they had chosen this spot for their nursery. In their nest was a very fine and nearly full-grown young cuckoo, (*Cuculus canorus*) in good condition and very lively, notwithstanding that he must have been without food for one whole day and two nights. Curiously enough, he had escaped detection from the thousands of eyes that must have beheld his domicile, and was restored in safety to his foster-parents, whose care he had already requited, after the fashion of Cuculidæ, by ejecting their own offspring from the parent nest.—*William Gostling; 14, Chester Place, Kennington Cross, September* 4, 1857.

Swallows building against a House.—I have no doubt that you are right in supposing that Mr. Slaney (Zool. 5756), in talking of the best way of preventing swallows and martins attaching their nests to our houses in inconvenient places, refers *only* to martins, as of course they are generally the only birds which do build under our eaves; but yet I think it should be recorded that in one instance, to my certain knowledge, a swallow did construct its nest in such a position. This occurred at Wickham Court, in 1854. I observed a nest under the eaves of a cottage which appeared to be not nearly so compact or neat as is usual with the nest of the martin. On watching I soon saw the old bird enter it. I at once thought it was a swallow, though, as the sight was so short, I could not be sure of it. On procuring a ladder, however, the fact was placed beyond a doubt by the five speckled eggs contained in it. The nest seemed very rickety, and loosely attached to the sill, and, unlike the martin's nest, the top was not attached to any part of the projecting eaves, there being a space of about three inches between the two, by which the old bird made its entrance. Indeed, I think when the young birds were hatched it must have been impossible for this crazy habitation to sustain its own weight and that of five young birds; but, as I left Wickham Court immediately afterwards, I had no means of observing the result.—*R. B. Smith; Marlbro' College, Wilts, September* 4, 1857.

The Cornish Chough (Fregilus graculus) *near Tenby.*—A few miles from this watering place are the ruins of Manorbeer Castle, which I visited this afternoon. I was interested in observing that they are frequented by the Cornish chough, which are bred there in great abundance. I by chance met the village schoolmaster, who told me that in the breeding-season and in the winter they are very tame, and will collect in numbers round the school-room door at the time the school breaks up, in order to pick up the pieces of bread, &c., thrown to them by the children. He mentioned an anecdote of one of them which had been brought up by some children who lived about two miles from the village. Whenever they left home to go to school the bird would precede them, and arrive there a few minutes after they had started, and about twenty minutes before the children. This it did so regularly that the master knew when the children might be expected. He also told me that the chough is taught to speak more easily than the magpie, and that it is of a very thievish disposition.—*Samuel Gurney; Tenby, August* 22, 1857.

Nest of the Willow Warbler.—I think it may be worth while to mention, what does not seem known to most of our ornithologists, that the willow warbler often builds its nest some height above the ground. Yarrell mentions the chiffchaff's having its nest in this position as a great rarity. Out of seven willow wren's nests which I have met with during the last three or four years, four of them were above the ground, the remaining three only being in the positions generally ascribed to birds of this species. Of these four nests one was in some raspberry bushes trained against a wall: two others were in the ivy climbing round a tree, at about three feet from the ground; while the fourth was in some very lofty laurel bushes, upwards of nine feet from the ground. There can be no doubt about these nests not belonging to the chiffchaff, as in two instances I actually caught the old birds, and in the others I had a good opportunity of watching them, and seeing their light-coloured legs, a sure mark of distinction between the two species.—*R. B. Smith; Marlboro' College, Wilts, September* 4, 1857.

Nesting of the Wren.—The common wren is, next to the wood pigeon, the latest of our land birds in breeding. On the 10th of last July I found a nest with young birds; on the 12th, another, with five new-laid eggs; and on the 14th, a third, with six fresh eggs.—*Id.*

Late singing of the Thrush.—A few evenings ago I paid a visit to some fine sallow bushes not very far from our residence, for the purpose of catching specimens of the early Noctuæ. It was quite dusk, but still a thrush, perched "on some high spray" close to me, sang as clearly and as joyfully as though he were welcoming in the warm rays of the early sun. When I left the sallows the bird was still singing as perseveringly as ever, though it was nearly 9 o'clock, and the moon and stars were shining brightly in the heavens. Before I left Oxford for the Easter vacation, often, in the evenings, sometimes later than 9 o'clock, I heard a thrush singing from one of the fine old trees in Merton meadow. Is it usual for the thrush to sing as late as this?—*Murray A. Mathews; Merton College, Oxford.*

Velocity of Flight of the Water Ouzel.—A short time ago I had a fair opportunity of judging the velocity of flight of the water ouzel. The North Devon Railway runs for some distance almost parallel to the river Taw. One day when I was travelling on this line the noise of the train flushed an ouzel from his station, under an overhanging bush by the water-side. Birds of this species, like kingfishers, when frightened up, almost always fly over the course of the river, following it in all its windings, and rarely, except on occasions of extraordinary alarm, attempt to make swifter progress, and increase the distance between themselves and the enemy by cutting corners. On this occasion the ouzel in question did not depart from the general rule, being evidently tolerably accustomed to the passing trains. For nearly a mile he kept up with the train, which was then going at its full speed of a little over twenty miles the hour. I had some little excitement in speculating as to which in the end would win the race, the bird or the train. However, the train was obliged to slacken speed as it was nearing a station, and at the same time the river made a sudden turn; so that the ouzel shot a-head, and was lost to view.—*Id.*

The Buffbreasted Sandpiper (Tringa rufescens) *and Brown Snipe* (Scolopax grisea) *in Devonshire.*—I have received from a friend of mine a female specimen of the buff-breasted sandpiper, which he has just shot. The bird agrees with Yarrell's and Eyton's descriptions, except in its being about half an inch longer. Its being a female might perhaps account for its greater length. I have also a specimen of the brown snipe of Montagu, taken in this district a short time since. Being taken in the winter, it has not the rufous breast.—*H. Nicholls; Kingsbridge, South Devon, September* 15, 1857.

Rare Birds in Orkney.—A very fine specimen of the hoopoe (*Upupa epops*), in full adult plumage, was shot near Kirkwall, in the latter part of May last. On the 26th of last month two knots (*Tringa cinerea*) were shot near Kirkwall. One of them is a male in perfect summer plumage; the other is a female in winter dress, with a few feathers on the back excepted. These are the first I have heard of being shot in Orkney. An immature specimen of the glossy ibis (*Ibis falcinellus*) was shot on the 4th inst.: this is the first specimen I am aware of being shot in Orkney. This season the sedge warbler (*Sylvia Phragmitis*), reed warbler (*Sylvia arundinacea*), chaffinch (*Fringilla cœlebs*), and yellow bunting (*Emberiza citrinella*), have been found breeding here, which they have not done before to my knowledge. Perhaps this is owing to the very fine summer we have had.—*R. Dunn; Stromness, Orkney, September* 14, 1857.

Breeding of Teal in Dorset.—Empool, near Niton, Dorchester, is a favourite resort of the teal in the summer time. There is no river of any size there, but a number of rivulets wind in and out among large sedge-beds. A year seldom passes without one or more nests being discovered. This summer six young teal have been seen flying about with their parents. Teal are always very poor and unhealthy-looking when met with in the summer.—*R. B. Smith; Marlboro' College, Wilts.*

Wild Duck.—The wild duck is one of the earliest and also one of the latest breeders. Its eggs are frequently met with in March; and on the 18th of August I met with five or six young ducks, unable to flap, much less fly. Can any of your readers inform me whether two wild ducks are ever known to lay their eggs in the same nest; or, if not, what is the greatest number they ever lay? I met with a nest on the 23rd of April, 1855, containing nineteen eggs, all of which had been equally sat upon. When I first found it two ducks flew off, which, however, appeared to me to be the male and female, not two females; the second time only *one* drake flew off; so it would seem that *one* bird only had laid the prodigious number of nineteen eggs. —*Id.*

Notes and Remarks on a few of the Birds of Southern India.

By Captain HENRY W. HADFIELD.

(Concluded from p. 5750).

HAVING already stated that my remarks were to be confined to a "few of the birds of Southern India," I need only add that the expression must be taken in its most literal sense, the present paper containing all I have to offer on the subject, not liking to trust too much to memory in these matters, but, unless I had recourse to it, my observations would probably soon dwindle into a mere enumeration of species, and a very imperfect one too.

Indian Falcon. Although I never observed this hawk in a wild state I saw several in captivity, during my stay at Combaconune; they were powerful and voracious birds: their plumage is much darker than that of the European falcons. I was once present at a great display of falconry, given by a Rajah of the neighbourhood, and, not having witnessed anything of the kind I gladly availed myself of this opportunity, but must confess to having been disappointed, although my anticipations of deriving amusement from the scene were by no means great. We were up with the lark, having a long distance to go before we could expect to find swampy or suitable ground, the paddy-fields at that season being in a dry and uncultivated state. Besides there was much time lost in useless parade, as is invariably the case in the East when there is anything to be done, either good, bad or indifferent! Several herons were, however, eventually discovered, reposing in their usual listless and sluggish attitude, with their heads buried between their shoulders, for the moment quite unconscious of the presence of their deadly foe, but who was no sooner observed than the scene was changed in an instant. Even the gray paddy-bird seemed suddenly, as if by magic, transformed into a beautiful white egret (although not blanched through fear, in the twinkling of an eye, as the locks of the doomed French queen were said to be). This may appear somewhat wonderful, but the fact is that when seen in a state of repose, as above described, they appear, even at a short distance, of a dark gray colour, the outer wing-coverts, as well as quills, being dusky, with more or less of that colour on the back; but, when their large wings are expanded, the whole of the sides and body, which are of a pure white, are exposed, which accounts for the metamorphosis alluded to. The herons were not only wide awake, but to be seen scudding in all directions, exerting their utmost powers of wing in vain endeavours to effect their escape, for the hawks generally proved too quick for them; however, their chief aim seemed to be the gaining of a considerable elevation,—that of the falcon to prevent it, which it generally succeeded in, and, having got the ascendant, it was all up with the poor paddy-bird, and down it would come like a stone, often without waiting the attack or having a feather injured, and there it lay cowering and crouching till the hawk thought proper to give it the *coup de grâce*. So ended the day's sport, which resulted in the slaughter of some half-dozen wretched herons, to say nothing of those we may have left more dead than alive through their fright. The loss on our side was one hawk missing, notwithstanding the strenuous endeavours of the falconer to win back the fugitive by a free use of the lure.

Mino. Very common all over the country, and, like the starling, frequents the pasture-lands where cattle are feeding: although not an elegant bird, its glossy black plumage is very beautiful, and the slight yellow line or patch on the cheek is at all times remarkable.

When stationed at Cochin, there was one about the house, belonging to a servant, which had been taught not only to repeat the name and rank of an officer of the regiment, but to go through the platoon exercise.

Black Robin of the Carnatic (*Tanagra nigricollis*, Linn.). Many years since, when stationed for a time at Combaconune, a place situated to the south-eastward of Trichinopoly, and not far distant from Tanjore, I first noticed this bird, which, from the striking resemblance it bears, both in form and habits, to the redbreast, I used in after years to speak of and designate as the "black robin of Combaconune," never having, that I can remember, met with it elsewhere. I was doomed to pass several long and dreary months there, with no other companions but my two black friends, who became so familiar that they were seldom out of the house, hopping about the floor, and perching on the backs of the chairs, perfectly regardless of my presence. The male was an exceedingly handsome bird, with glossy jet-black plumage, excepting a spot or bar of white on the wings; but the female was clad in more sober colours, being of a sooty black, looking like a robin that has just come down a chimney. They bear a greater resemblance to the pied flycatcher than to any other bird that I know of; but the latter is shy and solitary, the former just the reverse: besides I never observed them catching flies, but think it possible they may have been attracted to the house by the innumerable little red ants with which it swarmed, and were to be seen daily issuing forth from the numerous holes with which the floor was perforated in long continuous lines or columns, not unlike an army on the march, but occasionally diverging or taking ground to the right or left, to see—or rather try—of what one's legs were made of; and their bite is not only painful, but causes an irritable sensation for a long time after. The black robins were frequently to be seen during the day, perched on the ledge or coping of the wall beneath the roof or ceiling of the bungalow, and had, I fancy, constructed their nest in some hole or corner of the building, as they were seldom absent from it. The description I have seen of the little black Tanagra seems to answer pretty well, although I think it must be somewhat larger than my black robin, as it is said to be about six inches and a half in length. The male wholly black, except a spot of white on the wing; the female rufous and ash-coloured. It is also described as being so familiar as to visit the dwellings. Probably some reader of the 'Zoologist,' more conversant with the birds of Southern India than I profess to be, can identify it, as possibly it may be common enough in other parts of India.

Gray Coromandel Kingfisher (*Alcedo coromanda* of Sonnerat). Very common indeed on most rivers and streams near the sea-coast, where they may be seen in great numbers for hours at a time fishing, which they pursue by balancing themselves above the water, tern-like, keeping in a stationary position before they make the plunge, by a constant and rapid vibration of the wings. After capturing a fish, they return at once to their aërial post of inspection; this is a peculiarity in their manner of fishing,—at least I never observed it in the common European kingfisher, which is described by Montagu as invariably perching on trees for that purpose:—"But it is a mistaken notion that these birds suspend themselves on wing, and dart on their prey like the osprey; the fact is, they sit patiently on a bough over the water, and when a small fish comes near the surface they dart on it, and seize it with their bill." Cuvier states that "Ils vivent de petits poissons q'uils prennent en se precipitant dans l'eau du haut de quelques branches ou ils se tenant perchès pour guetter leur proie." It is by no means so shy and wary a bird as the European.

Indian Swallow (*Hirundo indica,* Lath.). The common swallow of the Carnatic: is found to frequent (almost invariably, I believe) the banks of rivers and nullahs near the coast, where it is constantly to be seen in pursuit of the flies and gnats that swarm there. In appearance, as well as in habits, it bears a striking resemblance to our sand-martin, although the plumage is of a lighter and duller brown, and, in point of size, it is considerably less, but, never having measured one, I am not prepared to say how much, but I believe the following description to be tolerably correct:—Length about four inches; bill dusky; upper parts, including wings and tail, light brown; under parts dusky white; wings long; tail forked.

Indian Lark. Common enough, but nevertheless greatly prized by the natives, particularly by the Mahometans, on account of its song; they not only cage them, but carry them about on most occasions, particularly when they attend the morning worship at the mosque, suspending the cages at the door, that the song of the larks may accompany them in their prayers. The cages are very small, low and of an oblong shape, often highly ornamental, but, on the occasions referred to, are so completely enveloped, that nothing is to be seen of the birds. With the exception of being smaller than our skylark, I have observed nothing remarkable about them; but in a part of the world of which it may be said, almost literally, that there are no song-birds, they are of course much valued, for, with respect to the song of the bull-bull, I am inclined to think that, if not altogether a poetical fiction, much at least that has been said or sung of its wonderful powers must be ascribed to the over-excited imagination of the poet.

Pensile Weaver or Warbler (*Ploceus pensilis* of Tem., *Saxia*, Linn.). Is one of the most beautiful as well as elegantly shaped birds of the East: I had a good opportunity of observing its habits, having on one occasion been encamped for some days on the banks of a river close to an old fort, where a colony of weavers (*P. pensilis*, I believe) had taken up a strong, in fact a fortified, position, their nests being suspended at the very extremity of the drooping branches of some trees, which had sprung up at the foot of the crumbling walls of this ancient fortress, their instinctive sagacity having led them to select what might truly be considered an impregnable post. On the opposite or south side of the fosse was an embankment or glacis, on ascending which the pendulous nests appeared so near that one had a difficulty in believing or in realizing the utter impracticability of a nearer approach, for the moat, although narrow, was unfordable, so, in reality, they were just as secure as if it had been some hundred yards wide. Not only were they safe from the intrusive hand of man, but it would have puzzled a monkey to have got at them, for although it might possibly have descended the wall into the ditch, it would have been quite impossible for one to have reached the nests, which were placed on the slender twigs of the branches overshadowing the water, and were far too slight to have borne even the weight of a much smaller animal; so it is easily foreseen what the inevitable result would have been had the attempt been made. Probably a snake might have had a better chance of success, but it is doubtful whether it would have risked the ascent, or rather descent. The flight of the weaver somewhat resembles that of the swallow. When seen soaring and sporting in the sun, the glossy green plumage of the back is very resplendent, and it was a most interesting sight to watch these light and active little creatures in pursuit (as I thought) of the gnats and flies, which swarm in such localities, although I am aware that the weaver is said to be granivorous. A minute description of the nest, which appears as if suspended in mid-air, and is rocked and waved to and fro with every breeze, will not be necessary, it having been so frequently brought to Europe: suffice it to say that it is pear-shaped, the stem of which fruit might serve to represent the slight fibrous cord which unites and secures it to the branch, the opening being placed at the large end, near the bottom of the nest, in which there is a passage or division forming two compartments, the whole being so closely and firmly woven together that it would require some force to break through this grassy and fibrous matting.

Mango,—Humming Bird (*Trochilus Mango*). Although the humming bird is not common in the South of India, I have occasionally seen what I believe to have been the above-mentioned species, in my garden at Trichinopoly, its favorite place of resort being a round plot or border in front of the door, filled with a great variety of flowering shrubs; and many a time have I gazed with delight at this winged gem, with its bright and glossy emerald plumage, but rendered tenfold more brilliant by the rays of a noontide tropical sun, which, falling on the out-spread quivering wings, thereby not only enhance the splendour of the original tints, but call new shades into existence. [I thought the genus Trochilus, or true humming bird, was exclusively American.—*E. N.*]

Green Paroquet. There is in the South of India a diminutive paroquet, about the size of the common bunting, its plumage being of a beautiful green colour, without a spot of red on it; it is by no means common or even generally known: I met with it quite by chance at Courtallum, at the foot of the Ghauts, in the range of mountains which separate the Coromandel plains from those of Malabar, and succeeded in capturing a dozen or more, which soon became tame and were much and generally admired. Their manner of roosting is very peculiar, suspending themselves, bat-like, by the claws, from the top bars of the cage, with their heads hanging down.

Green Indian Pigeon. This bird is not easily descried among the branches or foliage of the lofty trees which it frequents, and it would frequently be passed unnoticed by sportsman or ornithologist, if not detected and pointed out by their lynx-eyed native followers. This is a large and exceedingly beautiful pigeon, and inferior to none in the delicacy of its flesh.

Malabar Turtle Dove (*Columba turtur*, Linn.). These doves are so numerous in India that the jungle at times seems almost alive with them, so much so that their almost incessant cooing becomes tiresome, if not fatiguing, and their tameness is so great that they might be shot by hundreds, but they are not much molested, in consequence of their not being held in much esteem as an article of food.

HENRY W. HADFIELD.

Tunbridge, August, 1857.

Notes and Remarks on the Storm Petrel, American Bittern, Night Hawk, &c. By Captain HENRY W. HADFIELD.

JULY 12, 1857. — When only a few miles from the north-west coast of Ireland (the day after leaving Liverpool), I observed a few storm petrels. I had on the previous evening seen several puffins and guillemots off the Calf of Mann. 19th.—When about half-way across the Atlantic, saw several storm petrels about the ship, and following in the wake, occasionally settling down on the water for a few seconds, but more frequently merely dipping the legs or feet, but whether they were made use of in picking up food from the surface, I could not distinguish, though I should imagine that their webbed feet would prevent their obtaining it in that manner, and that when so seen they were engaged in taking a closer inspection of the water. 20th.—The steamer was to-day followed by a great number of gulls and a few storm petrels, the latter approaching so near that I could observe the white patch on the rump. The former were to be seen in vast numbers; but there were only two kinds; indeed, I had at first supposed that they all belonged to one species, and that the few dark or dusky ones might be young and immature birds; but on a closer inspection I perceived that the latter were both longer in the wing and neck, and that, moreover, in their flight they kept apart from the short-winged white gulls, which are speckled on the wings, making gray appear the predominant colour of that part; the quills are tipped with black. There are patches of white on the wings, both above and beneath, which are peculiarly conspicuous, giving to the edge of the wing an appearance of having been cut. The body is short and stout, head large, neck short. They frequently, on observing food, settled on the water, on these occasions invariably fighting for every mouthful. 21st. — Saw a few gulls and petrels. 22nd. — At 8 o'clock A. M. observed a small brown bird not unlike the willow wren in shape. After flying round the ship it settled on the rigging, where it was caught, but subsequently released before I had an opportunity of examining it.

American Bittern (*Ardea minor*, Wilson). July 23, 1857.—When snipe-shooting near St. John's, Newfoundland, a bittern rose out of a marsh, which proved to be the American bittern, which, I was subsequently informed, is a very rare bird in the island; and I am inclined to believe it to be so, for on my way back to the town scarcely a person passed who did not either inquire what bird it was, or stop to examine it, declaring that they had never seen one like it. One woman, somewhat more imaginative than the rest, ventured to suggest that it might probably be an eagle! It will not be necessary for me to do more than make a few passing remarks, this bird having been so fully described by Wilson and others; however, my specimen must be a peculiarly small one, for the entire length of the bill, measured from the gape, is only 3½ inches, whereas Wilson tells us that the bill of the American bittern is 4 inches in length. Unfortunately, I did not, as usual before skinning it, take the dimensions. The entire length, as given by Wilson, is 27 inches; but the skin measures 23 inches only; it may have, and probably has, shrunk; still, the bill being ½ an inch shorter proves, almost beyond a doubt, that the bird must have been smaller; besides, the tarsus is only 3½ inches in length, whereas another author says it is 3¾ inches. The upper mandible along the ridge measures, from plumes, but 2½ inches. The centre claw, which is serrated internally, measures 6-tenths of an inch.

Storm Petrel. Wilson states that the reason of its following ships is to procure the seeds of the gulf-weed and barnacles. "Thus it appears that these seeds, floating perhaps a little below the surface, and the barnacles with which ships' bottoms usually abound, being both occasionally thrown up to the surface by the action of the vessel through the water in blowing weather, entice these birds to follow in the ship's wake at such times, and not, as some have imagined, merely to seek shelter from the storm." Having passed at least two years of my life at sea, I may perhaps be excused if I venture to make a few remarks, which cannot, I think, fail to convince those interested in the subject that Wilson's idea of the storm petrel's generally following vessels for the sake of the sea-weed and barnacles was an erroneous one. I have doubled the Cape of Good Hope six times, in six different ships, one having been a short time previously entirely newly coppered at Lisbon, in consequence of damage sustained in a storm in the Bay of Biscay; and at least two more of the vessels referred to must have been clean-bottomed. Although I write at a considerable distance of time, I may safely say that I never rounded the Cape, or made a long voyage, without seeing numerous storm petrels following the vessels, more particularly in stormy weather. So much for their feeding on barnacles. As to the gulf-weed, there could of course be none of that in those latitudes. However, I am of Wilson's opinion with respect to the absurd notion of the petrel's seeking shelter under the sides or sterns of ships: there can, I think, be no doubt of their being attracted by the refuse particles of food thrown over-board, on which I have myself observed them to feed. If the storm petrel now requires to shelter itself from the storm under the lee of ships, they must have fared badly indeed ere Diaz and the early Portuguese navigators doubled the cape, or Columbus discovered the Continent of America. As to their being the precursors of the storm, though I am by no means superstitious, and am one of those who think a safe and prosperous voyage may be made across the Atlantic or Pacific without either setting sail of a Sunday, or having a horse-shoe nailed over the galley-door; still, I must confess to having a dislike to the appearance of the storm petrel; for, although it cannot perhaps be fairly charged with raising the wind, there can be no doubt of their gathering around ships in stormy weather, probably for this reason,—that they find a difficulty in procuring their ordinary food, which doubtless consists of the oily substances which in calm weather are so constantly to be seen floating on the surface of the water. [May I ask what is the seed of the gulf-weed to which Wilson alludes? Has the gulf-weed any other seed than the minute spores invisible alike to birds and men?—*E. N.*]

Humming Bird (*Trochilus Colubris,* Wilson). August 28, 1857.—Observed one hovering over the flowers of the scarlet runner in a neighbouring garden. Had previously caught a momentary glance of one near the same spot. They appear, however, common enough in this neighbourhood; at least, I was informed by an intelligent bird-stuffer in this town that he had killed six in one day. They frequent those gardens only where flowers abound, and as yet I have had no opportunity of examining them closely, or observing their manners. Their flight is so rapid that, unless on the look-out for them, they might pass unobserved. To say they shoot by like an arrow would be but to convey a faint idea indeed of the rapidity of it: a flash of lightning, passing ray of light or sunbeam would be more appropriate, although it may appear somewhat extravagant.

Yellow Bird or Goldfinch (*Fringilla tristis,* Wilson). Length 5 inches; extent of wings 9 inches; wing from flexure 3 inches, from shoulder 3 inches and 6-tenths, bill along the ridge 4-tenths, lower mandible 4-tenths; forehead black; nape and back greenish yellow; neck, breast and belly bright yellow; under tail-coverts white; length of tail 2 inches, with twelve feathers, two centre ones shorter, pointed and black, lateral ones broadly margined on the inner webs and tipped with white, each feather being more or less cut out; bill reddish yellow, tipped with black; under wing-coverts gray, tinged with yellow. The wing has eighteen quills, second longest, first and third about the same length; six first quills black, the rest tipped and margined with white on the inner webs; second, third and fourth indented and cut out. Spurious wing olive-green; feathers edged with black;

wing-coverts black, tipped with white. Length of thigh 1 inch; tarsus 3-fourths of an inch; middle toe ½ an inch, claw 2-tenths; inner toe 4-tenths of an inch, claw 1½-tenth; outer toe 3½-tenths, claw 1½-tenth; hind toe 3-tenths, claw 2-tenths. Although differing much both in size and colour, it bears a striking resemblance to the European bird in form and note, as well as in manner of feeding. The one I have so imperfectly described (for it was much injured in the shooting) was perched on a thistle.

Yellow Wood Wren (probably the Yellow-throat of Wilson, *Sylvia marylandica*). August 24.—Shot a yellow wood wren. Length 5 inches and 1-tenth; extent of wings 7½ inches; bill along ridge 3½-tenths, lower mandible 4-tenths (from plumes 3-tenths), bluish black, but light beneath and on the sides; forehead yellowish green, nape and back olive-green; cheeks, neck, and whole under parts of a most delicate light yellow, but it is of a darker hue between the upper mandible and eye, and beneath the wing becomes of a bright yellow; there are also spots or streaks of the same on the breast and sides; eye small and black; body rather broad and full; wing, third quill longest, second nearly as long, from fourth to ninth regularly graduating, tenth considerably shorter, and up to the fifteenth inclusive of about equal length, but the sixteenth is 1½-tenth longer, the seventeenth decreases by 2-tenths of an inch and the eighteenth by 3-tenths; wing rather short, from flexure 2½ inches; quills hair-brown, margined with bright yellow on the outer webs, and with yellowish white on the inner, each quill being slightly tipped with gray; feathers of spurious wing dark brown, but very broadly margined with greenish yellow; primary coverts hair-brown, margined and tipped with light grayish yellow; secondary coverts hair-brown, broadly margined on the outer webs with pale yellow, and slightly edged with gray on the inner; the under wing-coverts are of a bright and glossy yellow; sides and thighs olive-green, intermixed with yellow; tail 1 inch and 9-tenths,—lateral feathers longest, hair-brown, margined with dark yellow on the outer and with light yellow on the inner webs,—the centre ones dark brown on the shafts and at the tips, the rest of the feathers being of a light yellow; tarsus, toes and claws of a light reddish brown; sides of the neck gray, with a greenish tinge; thigh 1 inch, tarsus 8-tenths; hind toe 2½-tenths, claw 2-tenths; middle toe ½ an inch, claw 1½-tenth of an inch; inner toe 3-tenths, claw 1¼-tenth; outer toe 3-tenths, claw 1¼-tenth.

Night Hawk (*Caprimulgus americanus*, Wilson). August 26.—Shot a male bird of this species. Length 9½ inches; extent of wings

1 foot 11½ inches, from cubitus or shoulder 10 inches and 2-tenths, from flexure 8½ inches; tarsus 7-tenths; middle toe 6½-tenths, claw 2-tenths; inner toe 4-tenths, claw 1-tenth; outer toe 4-tenths, claw 1½-tenth; hind toe 2-tenths, claw 1-tenth; bill along ridge 3-tenths; lower mandible from plumes 1½-tenth; mouth 1 inch wide; head 1 inch and 1-fourth broad; eye black and very large, diameter about 4-tenths of an inch. The bill is black; the nostrils, which project, are rounded and large, placed about 1-third of the way up the bill; there are numerous black bristles on the sides as well as above and beneath the bill, where they extend to within one-tenth of an inch of the point, having a beard-like appearance; there are also a few hairs on the upper mandible, extending beyond the nostrils. The head is black, but the feathers are spotted and margined with white and rufous; many of the feathers on the sides of the head are indented, giving them an oak-leaf appearance. There are numerous white spots over the eye. The back is black, but each feather has several white spots, besides being margined with white. The chin and throat are pure white. The feathers beneath the eye, and on the sides of the neck and scapulars, are of a dull yellowish brown, margined with black. The feathers of the lower neck and sides are elongated, intensely black, most delicately and beautifully spotted, barred and margined with pale buff, gray and white, the latter colours predominating towards the rump, so as to become in a great measure blended with the elongated secondary wing-coverts. The tail, which is 4 inches and 9-tenths in length, is composed of ten feathers, and is greatly forked, the lateral feathers being 3-fourths of an inch longer than the central ones. There are irregular oblong patches of white, about 4-tenths of an inch in depth, on all but the two centre feathers, forming an incomplete bar across the tail, at about half an inch from the extremity; there are also, on the first or outer feather, nine irregular narrow bars of white, tinged with yellow; eight on the second and third feathers, seven on the fourth; and the two centre ones have eight bars of reddish gray, but have no white spots. The upper tail-coverts are black, barred with white; the under tail-coverts are elongated, reaching to within an inch of the ends of the two centre feathers; they are white, tinged with yellow, the two centre ones having seven black transverse lines, the first being spear-shaped; the rest of the coverts are marked in a similar and regular manner, but with a proportionately less number of stripes. The breast is black, the feathers slightly barred and tipped with white, gray and reddish yellow. The whole of the under parts from breast to vent are regu-

larly marked with alternate transverse bars of black and white, tinged with yellow. Under wing primary coverts black; secondary coverts black, very elongated, regularly barred with white on the inner webs throughout their entire length, but with merely one white spot on the outer, each feather being tipped with white; all the smaller coverts, both primary and secondary, are disposed transversely, in close and regular order, like scales, with alternate circular black and white markings, but with a rufous tinge. The leg is feathered to within 2-tenths of an inch of the foot. The centre claw is serrated on the inner side, having, with its nine teeth, a regular comb-like appearance. The wing has nineteen quills, the first being longest; up to the tenth inclusive regularly decreasing; from this point or angle of the wing the feathers as gradually increase up to the nineteenth and last. The three last of the secondary coverts are longer than the quills. There is an irregular square white spot on the first quill, at about four inches from the tip, covering the whole breadth of the inner web, and about 3-fourths of an inch in length, but the shaft is black; the white extends to the fifth quill inclusive, but the spots are irregular and larger, including the shafts as well as outer webs of all but the second quill, which has an oblong spot of white near the shaft, the rest of the outer web being black; the sixth quill has two faint spots of white on the inner web towards the point; the seventh has three indistinct and irregular bars of white; the eighth has the same, with a few scattered spots lower down; the bars of white then become more regular and distinct on the rest of the quills, some of the last having an additional or fourth line of white. The primary coverts are black, tipped with gray; the secondary coverts are the same, but spotted with white on the outer webs, which are indented and cut out, giving to the feather a most elegant oak-leaf shape; the rest of the upper coverts, as well as the feathers of the spurious wings, are black, barred, spotted and margined with gray, intermixed with light yellow, the whole of the colours being most beautifully blended, but there is a spot of white at the flexure. The legs and claws are of a dark purplish brown. The white spot on the neck is spear-shaped, passing round towards the ears.

It was about half-past 4 o'clock P. M. when my attention was first directed to a flight of these most elegant birds; and a more beautiful sight, at least for an ornithologist, could not be desired; for some forty or fifty were to be seen within a very narrow circle hawking flies; and their manner of doing so, and rapidity of flight, was in the distance so similar to that of the swallow, that I was at first inclined to believe that it was a flock of swifts that was approaching, but I was soon undeceived. They were now to be seen passing over-head at the distance of thirty or forty yards. Their flight was circular, but they were constantly deviating from this order of progression by momentary and sudden darts after the flies, often, when descending, raising the wings so as to bring the points nearly together, after the manner of the pigeon tribe. Their flight was most buoyant, and occasionally bat-like, and somewhat similar to that of the hawk or tern. On my shooting the one I have endeavoured to describe, the rest dispersed. Although shot through the head as well as in the body, I had some difficulty in killing it, its tenacity of life was so great. Wilson says that "there are no bristles about the bill;" but this is a mistake. The quantity of flies that these birds destroy daily must be immense, for, although the one in question was shot at the early hour above named, and consequently could not have been long feeding, it had managed to collect some hundred flies, for, although I did not and could not count them, I found, on opening the stomach, which was more distended than that of any other bird's I ever saw, and measured 4 inches in circumference lengthwise and 3¼ in breadth, that it was crammed full of flies, and I took three from its mouth and gullet. Although not opened till the day after it was shot, one fly, of a yellowish brown colour, with transparent wings, crawled out and escaped.

HENRY W. HADFIELD.

Kingston, Canada West,
Sept. 2, 1857.

Snake diving for Water Newts.—I detected the common snake the other day emerging from a pond with a newt (*Triton palustris*) in its mouth, which it had caught by diving. The snake seems to take to the water very much for food or coolness during the summer months. One is hardly ever met with at a distance from a stream or pond.—*B. B. Smith; Marlboro' College, Wilts, September* 4, 1857.

Occurrence of Opilio hystrix at Kibworth.—Having been on the look-out this year, I have found that Opilio hystrix is by no means an uncommon spider here. The majority of my specimens have been taken among violets; two more, however, have occurred in the house; they doubtless wandered in from a bed of violets close to the window. (*Vide* Zool. 5627).—*Alfred Merle Norman; September* 8, 1857.

Zoological Notes of a Residence in Vienna in 1856.*

By Cuthbert Collingwood, M.D.

A WINTER residence in a large capital, it must be confessed, is not exactly the condition most favourable to the study and observation of Natural History facts; much, however, may be done in the early spring; and this idea was not absent from my mind when I determined to prolong my sojourn at Vienna until the month of May, in time to note the arrival of visitors from the South. The following paper, therefore, by no means aims at presenting a complete Fauna Vindebonensis, nor even a list of such animals as are found in its vicinity, which might perhaps be written as easily in London, but will consist simply of remarks extracted from my note-book, and arranged in such a form as is most likely to give them interest.

Vienna, however, though a large city, is by no means deficient in spots in its vicinity which, when once reached, are favourable to such observations. It consists of two distinct cities, the inner closely packed and strongly fortified, beyond the deep moats of which extends, in all directions (except one point), a glacis, that is, a wide, open, grassy space, planted with avenues of chestnuts, limes and acacias, which do not, however, afford much protection from the piercing winds of winter, nor, if I can take the word of the universally grumbling residents, from the scorching suns and blinding dust of summer. Beyond this are the suburbs, or outer city, which stretches indefinitely in all directions, and is very extensive. The Danube does not come fairly up to Vienna, but the main stream divides several miles distant from the city, and only a small arm, designated the canal, touches the outside of the fortifications; and it is here that the glacis narrows, and is replaced by a bridge leading to the most populous and fashionable suburb.

There are, however, numerous spots in the vicinity of the city where the naturalist may find himself amply employed; for Vienna is rich in gardens, usually, it is true, cut in the formal Italian style, but abounding in birds. Such are the Augarten, Prince Schwartzenberg's garden, the Imperial gardens at Schönbrunn, &c.; but, above all, there is the Prater, an extensive wooded tract, the remains of an ancient forest which once occupied the greater part of the site of Vienna. The city has gradually encroached upon it; but still it is very considerable, and was laid out in 1766, by the Emperor Joseph II., in fine alleys stretching far away to the main stream of the Danube, which constitute the Rotten Row of Vienna. In this Prater fairs are held, fireworks exhibited, and the main alleys are crowded with rank and fashion; but let the naturalist diverge a little from the beaten track, and he finds himself in the forest, which affords him ample scope for his pursuits. This part is usually called "Der wilde Prater," and even within hearing of the roll of carriages, the tramp of the Imperial escort, the grinding of organs, the beating of drums, and the shouts of the Jack-pudding, he may observe animals and birds in a state of nature, which the English naturalist would sometimes give much to catch a glimpse of. The climate of Vienna is variable in the extreme,—cold in winter, hot in summer. The whole of December was colder than I have ever known it in England; January was foggy throughout, a somewhat unusual circumstance there; February and March were wintry, with strong and keen east winds, and snow and ice held their own till the very end of the latter month; April was delightfully fine and warm, the only drawback being the clouds of dust which sometimes darkened the air; for no rain fell until May during a period of nearly seven months. When I quitted the place early in May, the weather was unsettled and cold. With such a climate Vienna is dreadfully unhealthy. On my arrival at the beginning of November the cholera had just ceased its fatal work for the season; a severe epidemic of typhus fever raged during the dead months of winter, to be succeeded, in February and March, by abundant pneumonia, of a character as severe and with results as fatal.

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* The substance of this paper was read to the Greenwich Natural History Club.

There are few places in Vienna more striking, and to a naturalist more interesting, than the Wild-bret-markt, or game market; not that any very great variety of birds are seen there, but chiefly on account of the vast numbers of quadrupeds which are exposed for sale. It is a small and unpromising spot, but on a market day it offers a surprising spectacle to the visitor. If Leadenhall market carries off the palm for its regiments of geese, turkeys, poultry and pheasants, then must the Wild-bret-markt of Vienna be held superior for its heaps of deer and piles of wild boars. The market day is thrice weekly, and on those days a stranger would be perfectly astonished at the vast numbers of such animals which are laid out in rows upon the ground. I have counted eighty roebucks spread out before one little shop; they were of all sizes, from the well-antlered lord of the herd to the young fawn; all shot with the hunter's rifle, and now disembowelled. Wild boars, too, of all sizes, from the fierce-looking monster, with tusks a foot long, to the little pig which has not forgotten its mamma. Heaps, literal heaps, of these huge black animals may be seen scattered over the market-place, and cart-loads may be met passing through the street. Then, perhaps, the hares are scarcely less extraordinary for their numbers, which amount to thousands daily; and they are carted away very systematically on poles, about sixty or seventy being hung by the hind legs to one pole, and the poles thus laid across the cart in rows, so that one cart-load contains, perhaps, nearly a thousand hares. These vast numbers of wild boars are obtained from the Imperial Thiergarten, an extensive enclosure a few miles from Vienna, whose walls encircle a space of country equalling the whole city and its suburbs. In this Royal park these fierce animals roam about unrestrained, and woe to the unwary trespasser who finds himself matched against their ruthless tusks. The deer and hares are found abundantly on all sides of Vienna.

Among these hecatombs it is not uncommon to see several chamois. They are by no means so common as roes; but still it is rarely the case that there are not at least two or three chamois hanging up in each shop on a market day. They are brought from the mountains of Steyermark, in Upper Austria, and would appear to be in these localities far more numerous than among the Alps, if I may judge from the few traces of them one sees or even hears of in a journey through their wildest and most elevated regions.

Besides these animals, a beaver (*Castor fiber*) is sometimes exhibited, taken in the Danubian meadows. This, however, is a rare occurrence. It is to be recollected that this beaver is probably specifically distinct from that of North America.

What becomes of such a vast quantity of wild animals I often puzzled myself to imagine. Their flesh is of course largely consumed in Vienna; but while roe and chamois are to be had at a tolerably cheap rate, wild boar is always charged high, for some unknown reason; but if any one is disposed to take my gastronomic taste for anything, he may rest assured that roebuck (Austrian roebuck) is by no means equal to our fallow venison, chamois is far inferior to Southdown, and wild boar is but a poor substitute for an English porker.

Fallow deer are unknown here, and this beautiful ornament of our English parks is replaced by roe. These animals are kept in large numbers, and it is something striking to come suddenly, in the depth of the wood, upon a herd (if I may be allowed the expression with respect to these deer) of perhaps a hundred of them. They are tolerably tame, and in general little heeded my proximity. They are somewhat larger than our fallow deer, but by no means so ornamental, either in form or colour, and much less graceful, while their uniform mouse-colour gives them an uninteresting sameness as contrasted with the elegant spotted denizens of our British parks. In the evening they are called by the sound of a horn, at which signal they assemble, and are fed and housed for the night. I have seen one of these animals take the water, and swim over the large arm of the Danube before a steamer, his antlered head appearing above the surface of the stream, exciting the liveliest sympathy among the kind-hearted Germans, who watched him with the utmost eagerness, exclaiming, "Das ist doch interessant! Armes Thier!" &c.

The Prater is, however, in some places, subject to the general law of exclusion, which is rendering some of our own woods so difficult of access. In more than one place my wandering feet have been arrested by the appearance of an ominous board, inscribed in German, French and English, to the effect that "By supreme authority no one is allowed to walk, ride or drive any further in this direction."

In Vienna there is not, as in some southern capitals, a bird-market to resort to, where the naturalist may, at his leisure, examine an array of ornithological specimens, and discover the Fauna of the country concentrated in the space of a few square yards. There are plenty of capercailzies from Steyermark, pheasants from Bohemia, partridges and the ordinary Grallæ, as "plover," ruffs, &c.; but Insessores there are none to be seen, although a dish of "kleine vögel" is to be had in every restaurant at a moment's notice. We must, therefore, repair to the fields and woods in order to find food for observation. But the first unusual bird which I remarked as British was an inhabitant of the city. On the glacis, between the inner and outer city, there are to be seen, all the winter, plenty of gray crows (*Corvus cornix*), feeding upon the heaps of refuse which, in certain parts of the glacis, are suffered to accumulate. About these heaps, and wherever that filthy stream the Wien (from which the city takes its name) meanders, the Royston crows may be seen very busily engaged. They go in pairs, or at most three or four together, and are far tamer than the rooks are with us, not at all heeding the passing and repassing of passengers among them all day long. These gray crows, too, are common in the vicinity of the city, and indeed exist there to the total exclusion of the rooks. I never saw a rook all the while I was residing in the city, and remarked the fact, feeling disposed to believe that their more powerful congeners kept them out of their

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